

List of Polyzoa collected by Captain H. W. Feilden in the North-Polar Expedition; with Descriptions of new Species. By GEORGE BUSK, F.R.S.

[Read June 15, 1880.]

(PLATE XIII.)

Suborder I. CHEILOSTOMATA, *Busk*.

Fam. 1. CELLULARIIDÆ, *Busk*.

Genus SCRUPOCELLARIA, *Van Ben*.

1 SCRUPOCELLARIA SCABRA, *Van Ben*. (sp.).

*Cellurina scabra*, *Van Ben. Bull. Brux.* t. xv. p. 73, figs. 3-6.

*Cellularia scabra* (*forma typica*), *Smitt, Öfvers. Skand. Hafs-Bryozoer*, 1867, pp. 283 & 314, tab. xvii. figs. 27-34.

*Cellularia scrupea*, *Alder, Trans. Tynes. Field-Club*, vol. iii. p. 148.

*Scrupocellaria scrupea*, *Busk, Quart. Journ. M. Sc.* iii. p. 254 (non aliter).

*Scrupocellaria Delilii*, *Alder, ib. n. ser. iv.* p. 107, pl. iv. figs. 4, 8; ? *Busk, l. c.* vii. p. 65, pl. xxii. figs. 1-3.

*Scrupocellaria scabra*, *Norman, On Rare British Polyzoa, Q. J. Mic. Sc.* viii. p. 214; *Hincks, Polyzoa from Iceland and Labrador, Ann. N. Hist.* Jan. 1877, p. 98.

? *Crisia Delilii*, *Audouin, Savigny*, pl. xii. fig. 3.

*Hab.* Arctic Sea, August 11, 1875, 13-15 fms., stony bottom (*H. W. F.*); Sir Edward Belcher's Expedition!; Hamilton Inlet, Labrador (*Wallich*); Godhavn Harbour, Disco, 5-20 fms. (*Norman*); Sabine Island, German Polar Expedition (teste *Hincks*); Parry's Island, Spitzbergen, 6-150 fms. (*Smitt*): Britain (*Norman*); Northumberland coast (*Alder*): coast of Belgium (*Van Ben.*).

Upon further consideration of this species, I am inclined to believe with Prof. Smitt and Mr. Norman that the northern form, first accurately defined by M. Van Beneden, is not identical with that to which, from its resemblance to Savigny's figure, I gave the name of *Scrupocellaria Delilii*; this was collected by Mr. J. Y. Johnson at Madeira, and I have also seen a well-marked specimen from Suda Bay, Crete, for which I am indebted to Prof. W. K. Parker. In this latter more especially, the great size of the lateral avicularia and the upright position and large size of the vibraculum clearly indicate that it represents the species figured by Savigny, and these are precisely the characters noticed by Mr. Norman (*l. c.* p. 215) as distinctive of *S. Delilii* from

*S. scabra*. In other respects, however, the resemblance between the northern and southern forms is extremely close.

Genus *MENIPEA*, *Lamx.*

1. *MENIPEA GRACILIS*, *mih.*

*Char.*—Zoœcia much elongated, subtubular downwards; aperture oval, border slightly thickened; usually a single spine on the outer side above and occasionally one on the inner; a broad arched, gibbous, entire operculum; anterior avicularium small, rare, and only (?) on the median zoœcium at a bifurcation. Median zoœcium not mucronate; five to nine cells in an internode. Polypide with 12 tentacles.

*Cellularia ternata* (*forma gracilis*), *Smitt, l. c.* 1867, pp. 283–310, pl. xvi. figs. 17, 18, 19, 20, 23, 24 (non 21, 22), (excl. syn.).

*Hab.* Franklin-Pierce Bay, 79° 29' N. lat., 13–15 fms. (*H. W. F.*); Spitzbergen, 200 fms. (*Smitt*).

The differences between this form of *Menipea* and the well-known typical *M. ternata* appear to me to be so obvious that I am quite unable to agree with Professor Smitt in considering them merely in the light of varieties, *i. e.* if we are to understand that his “*forma*” is equivalent to “*variety*.”

The points to which I would advert as affording sufficient marks of distinction are:—

1. The greater number of zoœcia in each internode.
2. The marginal spines being limited at most to two unjointed ones.
3. The much greater expansion of the operculum.
4. The absence of a mucronate spine at the summit of the median cell at a bifurcation, whilst in *M. ternata* there is always an articulated spine or mucro in that situation and very often two.

Amongst the synonyms of his “*forma gracilis*,” Prof. Smitt gives my *Menipea arctica*. But upon again referring to the original type specimen of that species from Dr. Wallich’s collection, procured in Hamilton’s Inlet, Labrador, 15 fms., the differences appear to be quite as great as those which exist between *M. gracilis* and *M. ternata*. The general habit is altogether different, and in *M. arctica* there is not the vestige of an operculum; and the median cell is mucronate, the mucro, however, not being articulated as it usually is in *M. ternata*.

Fam. 2. BICELLARIIDÆ, *Busk*.Genus BUGULA, *Oken*.1. BUGULA MURRAYANA, *Johnst.* (sp.).

Flustra Murrayana, *Johnst.*, *Sars, Danielssen, Packard*.

Flabellaria spiralis, *Gray, Brit. Radiata*, p. 106.

Bugula Murrayana, *Brit. M. Cat.* p. 46, pl. 59; *Smitt, l. c.* 1867, pp. 291 & 348, tab. xviii. figs. 19-27.

Avicella multispina, *Van. Ben.*

*Hab.* Franklin-Pierce Bay, 79° 29' N. lat. (*H. W. F.*); Hunde or Hune Island, Davis Strait (*Dr. Sutherland*); Holsteinborg Harbour (*Norman*); Ireland (*Wallich*, teste *Hincks*); Orkney (*Lieut. Thomas*); Shetland (*E. Forbes*); Dublin coast (*W. McCalla*).

2. BUGULA FRUTICOSA, *Packard* (sp.). Pl. XIII. fig. 1.

? Cellularia quadridentata, *Lovén, MS.* 1834 (teste *Smitt*).

Bugula Murrayana (*forma quadridentata*), *Smitt, l. c.* pp. 292 & 351, tab. xviii. figs. 25-27.

Menipea fruticosa, *Packard, List of Labrador Animals*, p. 9, pl. i. fig. 3.

Bugula Murrayana, var. fruticosa, *Hincks, l. c.* p. 98; *Norman, 'Valorous' Dredgings*.

Without expressing any positive opinion as to whether *Packard's* form is to be regarded as specifically distinct from *B. Murrayana*, I am inclined to look upon it in that light\*. The much slenderer habit—the branches being very often biserial—the usually total absence of marginal spines, or at most the presence of not more than one on either side above, the comparative rarity, and in many specimens the entire absence, of avicularia and their small size when existing, present to my mind a set of characters quite sufficient to justify the distinction of the more northern form from the typical *B. Murrayana*, which would appear but rarely to enter the Arctic zone, or at any rate to belong more properly to the temperate.

However this may be, the more abundant of the two *Bugulas* collected by Capt. Feilden agrees in all respects with Professor *Smitt's* figures 23 and 24; more especially as I have scarcely noticed any zoecium with more than two very slender spines, though four are mentioned in Prof. *Smitt's* description.

\* Since the above was in type I am more inclined to agree with those who regard *B. fruticosa* as a variety of *B. Murrayana*.

## Fam. 3. MEMBRANIPORIDÆ.

Genus MEMBRANIPORA, *Blainv.*1. MEMBRANIPORA UNICORNIS, *Alder.*

*Membranipora unicornis*, *Alder*, *Cat. Zooph. North. & Durham*, p. 56, pl. viii. fig. 6.

*Membranipora lineata* (*forma unicornis*,  $\beta\beta$ . stadium longius adultum), *Smitt*, *l. c.* pp. 365-399, pl. xx. figs. 30, 31.

? *Reptoflustrella americana*, *D'Orbig.*

*Hab.* Lat. 82° 27' N. (*H. W. F.*); Hamilton's Inlet, Labrador, 15 fms. (*Wallich!*); Spitzbergen 6-50 fms.; boreal and arctic seas generally (*Smitt*); coasts of Northumberland and Durham (*Alder*).

## Fam. 4. FLUSTRIDÆ.

Genus FLUSTRA, *B. M. Cat.*1. FLUSTRA SERRULATA, *n. sp.* Pl. XIII. figs. 2, 3, 4.

Zoarium constituted of narrow, ligulate, bifurcated branches, slightly expanded at the ends; zoœcia ovoid or oblong, open in front, except quite at the bottom, where there is a very narrow calcareous expansion; border of aperture finely serrated or beaded; oœcia small, immersed.

*Hab.* Franklin-Pierce Bay, 13 fms. (*H. W. F.*).

This *Flustra* appears to be quite a distinct form. The growth is irregularly branched, the branches or lobes varying in width from one eighth to nearly one fourth of an inch, and they are usually forked and slightly expanded at the ends. The substance of the zoarium is thick, and as it shrinks much in drying it is necessary, in order to see the characters clearly, to expand it by boiling in water, unless the specimen has been preserved in alcohol. The peculiar finely serrulated or beaded border of the aperture is a very distinctive character.

## Fam. 5. ESCHARIDÆ.

Genus MYRIOZOOM, *Donati.*1. MYRIOZOOM COARCTATUM, *Sars* (sp.).

*Cellepora coarctata*, *Sars*, *Reise Lof. og Finn.* p. 28.

*Leieschara* (and *Leiescharia*) *coarctata*, *id. N. Norsk. Polyz.* p. 17.

*Myrionozoum coarctatum et subgracile*, Hincks, *l. c.* p. 106; *Smitt, l. c.* pp. 18 & 119.

*Millepora truncata*, Fabricius, *Faun. Grænl.* p. 432; *Packard, l. c.* (teste *Smitt*).

? *Myrionozoum subgracile*, *D'Orb. Pal. Franç.* p. 662.

*Millepora truncata* (pars), *Lamouroux*; *Pallas*.

*Hab.* (Forma *subgracile*). Franklin-Pierce Bay, Smith's Sound, 13-15 fms. (*H. W. F.*); Arctic Sea (*Sir Ed. Belcher's Expedition!*); South Labrador (*Packard*); Newfoundland (*D'Orbig.*); Spitzbergen, 19-80 fms. (*Smitt*); Greenland (*Möller & Torell*); Holsteinborg Harbour, entrance of Baffin's Bay, 175 fms. (*Norman*, 'Valorous' Dredgings); Ireland, 100 fms. (*Wallich*, teste *Hincks*). (Forma *coarctata*) Norway (*Ström, Sars, &c.*); Finmark (*Lovén, Sars*).

That two apparently distinct forms of *Myrionozoum* are found in the northern and Arctic seas admits of no doubt. The *Leieschara coarctata* of Sars, with a large avicularium above the mouth of almost every zoecium, appears at first sight to be quite distinct from a slenderer form in which, as is often the case, there are no avicularia to be seen, or, in other cases, they are rarely and irregularly scattered amongst the mouths of the zoecia, are of far smaller size, and arise, as it would seem, in the transformation of one of the pits or alveoli with which the surface of the zoarium is covered. Or, again, avicularia may be seen in the same situation as in the typical *M. coarctatum*, but of small size and very few in number. Upon the survey of numerous specimens from different localities, it seems to me that a transition can be traced between the typical form and that termed by Prof. Smitt *M. subgracile*, which, as he assumes, is in all probability identical with *M. subgracile* of D'Orbigny, from Newfoundland.

The few specimens, probably belonging to not more than one or two individual growths, collected by Captain Feilden are of the *subgracile* type, which would appear in all cases to be the more northern form.

It may be mentioned that there is a still slenderer, quite unarmed species in North Japan, in which the zoarium is not constricted, probably closely allied to the above.

#### Genus ESCHARA.

##### 1. ESCHARA ELEGANTULA, *D'Orb.*

*Eschara elegantula*, *D'Orbigny* (1851), *Pal. Franç.* p. 102; *Smitt, l. c.*

1867, pp. 24 & 151, tab. xxvi. figs. 140-146; *Norman*, 'Valorous' dredgings.

*Eschara saccata*, *Busk*, *Ann. N. Hist.* ser. 2, vol. xviii. p. 33, pl. 1. fig. 1; *Sars*, *l. c.* 1862, p. 6.

*Hab.* Cape Napoleon, Cape Fraser, Aug. 11, 1875 (*H. W. F.*); Norway and Finmark (*M<sup>c</sup>Andrew*); Spitzbergen, Greenland, Finmark, 30-60 fms. (*Torell*, *Lovén*, *Sars*); Newfoundland (*D'Orbigny*); Hare Island, Waigat Straits, and lat. 66° 59' N., long. 55° 27' W., 57 fms. (*Norman*, 'Valorous' Dredgings).

As Professor Smitt states that he has compared specimens from the Arctic Seas with the type specimen in M. d'Orbigny's collection at Paris, there can be no doubt of the right to priority of D'Orbigny's designation. But I would remark that in none of the specimens of *E. elegantula* that have come under my notice have I observed the larger size of the lateral cells alluded to by the French naturalist as characteristic of the Newfoundland species.

The species is not mentioned by Mr. Hincks in his account of Dr. Wallich's collection from Iceland and Labrador; but I have several specimens received from Dr. Wallich, though from what precise locality is not recorded. The only indication placed upon them is "Arctic Sea, 100 fms."

## 2. *ESCHARA PERPUSILLA*, n. sp. Pl. XIII. fig. 5.

Zoarium diminutive, constituted of irregularly forked branches. Stem and lower part of branches cylindrical, towards the ends flattened. Zoœcia fusiform, elongate; mouth looking directly upwards (horizontal); anterior lip tridentate, the median denticle wide and expanding, the lateral pointed, conical; immediately in front of the median denticle an avicularium about half the length of the zoœcium, with a circular mandible, which opens upwards and backwards.

*Hab.* Arctic Sea, Aug. 11, 1875, 13-15 fms.; Franklin-Pierce Bay, Smith's Sound (*H. W. F.*).

At first sight this form might be regarded as a very dwarf variety of *E. elegantula*, from the circumstance that in the mature condition the zoœcium has an avicularium in the same situation as the organ it occupies in that species. But further examination shows that the two forms are, in other respects, quite distinct.

The characters by which *E. perpusilla* may be recognized are:—

1. The far smaller size of the *zoarium*, which probably does not exceed an inch in height, and the cylindrical form, for the most part, of the stem and branches.

2. The smaller dimensions of the avicularium, and more especially of its mandible.

3. The tripartite dentition of the anterior or inferior lip.

4. The deep immersion of the mouth and of the orifice of the avicularium in the older stages of growth, these parts, in fact, in the stem and lower part of the branches being entirely overgrown and obliterated. But before the complete closure is effected, the mouth of the zoecium, with the orifice of the avicularium and the median denticle immediately behind it, may be seen at the bottom of a deep pit, the mouth at this stage presenting a trefoil form, like the wound made by a leech-bite.

### 3. *ESCHARA SARSII*, *Smitt* (sp.).

*Escharoides Sarsii*, *Smitt*, *l. c.* 1867, pp. 24 & 158, pl. xxvi. figs. 147-154.

*Eschara rosacea*, *Sars*, *N. Norsk. Polyz.* p. 3 (non *Busk*).

*Cellepora cervicornis* (var.), *Sars*, *Reise Lof. og Finn.* p. 28.

*Hab.* Franklin-Pierce Bay, Smith's Sound, 13 fms. (*H. W. F.*); Spitzbergen, 20-60 fms. (*Smitt*); Greenland (*Möller & Torell*); Finmark, 80-100 fms. (*Sars, &c.*); Arctic Sea (*Sir Ed. Belcher's Expedition*); in lat. 74° 0' S., 172° 0' E., 330 fms. (*Hooker*, Voyage of 'Erebus' and 'Terror').

In all the specimens I have examined in the present collection there is only a single avicularium on one side of the preoral sinus. The species is particularly interesting as being identical with one, of which I have specimens, collected by Sir J. Hooker, on the voyage of the 'Erebus' and 'Terror,' in the Antarctic seas, accompanied in the same collection by two other Arctic species.

### GENUS HEMESCHARA, *Busk*.

#### 1. *HEMESCHARA SINCERA*, *Smitt* (sp.) (var. *inermis*).

*Discopora sincera* (*forma Hemeschara*), *Smitt*, *l. c.* 1867, pp. 28 & 177 pl. xxvii. figs. 178-180.

*Lepralia* (*Discopora*) *sincera*, *Hincks*, *l. c.* p. 102.

*Hab.* Franklin-Pierce Bay, Smith's Sound, 13 fms. (on *Cellepora cervicornis*) (*H. W. F.*); Spitzbergen, 19-60 fms. (*Smitt*); Finmark (*Lovén*); Arctic sea, — ? , 100 fms. (*Wallich!*); Hare

Island, Waigat Strait, entrance of Baffin's Bay, 175 fms. (*Norman*).

A specimen from Spitzbergen, for which I am indebted to Professor Smitt, incrusts *Eschara elegantula*, and which is named by him "*Discopora sincera*," differs from Capt. Feilden's specimens and those collected by Dr. Wallich, and in fact from all others that have come under my observation, in the absence of any avicularium on the side of the cell, and in the larger and more uniform size of the zoëcia. Mr. Hincks's figure (*l. c.*) exactly represents Dr. Wallich's and Captain Feilden's specimens. This difference, however, considering the other identical characters, cannot be regarded as indicative of more than a variety.

2. HEMESCHARA LANDSBOROVII?, *Johnst.* (sp.).

*Lepralia Landsborovii*, *Johnst.* (pars); ? *Brit. M. Cat.* p. 66, pl. 86. fig. 1.

*Escharella Landsborovii* (*forma typica*) (pars), *Smitt, l. c.* 1867, pp. 12 & 94, pl. xxiv. figs. 60-62 (*non cetera*).

*Hab.* Cape Fraser, 80 fms. (*H. W. F.*, on worm-tube); Spitzbergen (*Smitt*); Greenland, Copenhagen Museum (teste *Smitt*).

I follow Professor Smitt in terming this form *Landsborovii*, but am by no means satisfied that it should be referred to that species. There is no doubt, however, of the identity of Captain Feilden's specimens with the form figured as above cited by Professor Smitt. I should be more inclined to refer his *Escharella porifera* to that type.

Fam. 6. CELLEPORIDÆ.

Genus CELLEPORA, *Fabr.*

1. CELLEPORA CERVICORNIS, *mih.* Pl. XIII. figs. 6, 7, 8.

*Cellepora cervicornis*, *Busk, Ann. N. Hist.* ser. 2, vol. xviii. p. 32, pl. 1. fig. 1.

*Cellepora pumicosa*, *Sars, Reise Lof. og Finm.*; *Danielssen* (teste *Smitt*).

*Celleporaria incrassata*, *Smitt, l. c.* 1867, pp. 33 & 198, pl. xviii. figs. 212-216; *D'Orbigny* (pars); non *Lamarck*.

*Celleporaria surcularis*, *Packard*, teste *Smitt*.

? *Cellepora coronopus*, *S. Wood, Crag Polyzoa*, p. 57, pl. ix. figs. 1-3.

*Cellepora incrassata*, *Hincks, l. c.* p. 105.

*Hab.* Cape Napoleon, Cape Fraser (*H. W. F.*); Norway and Finmark (*M'Andrew, Lovén, &c.*); Spitzbergen and Greenland



(very abundant), 16–160 fms. (clay and stone) (*Smitt*); Newfoundland (*D'Orbigny*); ? Crag (fossil) (*S. Wood*); in lat.  $66^{\circ} 59' N.$ , long.  $55^{\circ} 27' W.$ , 57 fms. (*Norman*).

Although there can be little doubt that this very abundant Arctic species is included in *M. d'Orbigny's Celleporaria incrassata*, I can see no reason whatever for considering that it has any thing in common with the Mediterranean form figured by *Marsigli*, which has an entirely different aspect, to judge from the wretched figure contained in his work, and which was taken by *Lamarck* as the type of his *C. incrassata*. I have therefore ventured to retain the appellation I gave this species in 1856, deeming it highly probable that it represented *Mr. Couch's* species, notwithstanding his statement that the branches are compressed, whilst they are invariably cylindrical and tapering in the Arctic form. Perhaps, however, in view of the multiple applications of the name *cervicornis* to species of *Eschara* and *Cellepora*, it would be better to use another term altogether.

The agreement in general aspect between this species and that of the Crag *Cellepora coronopus* of *Mr. Searles Wood* is very striking; but, upon comparison of the minute characters, I am not prepared positively to regard the two as identical.

## Suborder II. CYCLOSTOMATA.

Fam. 1. DIASTOPORIDÆ, *Busk* (Brit. M. Cat. pt. iii. p. 27).

Genus MESENERIPORA, *Blainv.*

1. MESENERIPORA MEANDRINA ?, *Searles Wood* (sp.).

*Diastopora meandrina*, *S. Wood*, *Ann. Nat. Hist.* (1844) xiii. p. 14.

*Mesenteripora meandrina*, *Busk*, *Crag Polyzoa*, p. 109, pl. xvii. fig. 2, pl. xviii. fig. 4, pl. xx. fig. 2; *Smitt*, l. c. 1866, pp. 398 & 432.

? *Mesenteripora Eudesiana*, *M.-Edw.* *Sur les Crisies &c.* pl. 14. fig. 1.

? *Mesenteripora compressa*, *D'Orb.* l. c. p. 756.

? *Ditaxia compressa*, *Hagenow*, *Bryoz. Maastr.* p. 50, pl. 4. fig. 10.

*Hab.* Franklin-Pierce Bay, Aug. 10, 1875, 15 fms. (*H. W. F.*); Greenland (*Torell*), 16–40 fms.; ? Coralline Crag (fossil) (*S. Wood*).

The resemblance between this species and the *Mesenteripora meandrina* of the Coralline Crag is so close as hardly to admit of doubt as to their identity. But in this regard I am disposed to place more importance upon the absence of anastomoses between the folds of the zoarium than Professor *Smitt* is willing to allow.

As the present collection affords only a single specimen of this very interesting form, and that of small size as compared with Crag specimens, it might fairly be allowed that the absence of anastomoses was accidental, and consequent upon youth; but when I find that the same character was presented in specimens examined by Professor Smitt, and which, according to his measurements, appear to have had about the same dimensions as the one collected by Capt. Feilden, I am much disposed to look upon it as a very important differential character. I regarded it as such in the case of the numerous fossil, mostly Cretaceous, forms of *Mesenteripora*, and should be equally inclined to regard it as distinctive between the existing Arctic species and that from the Coralline Crag. Among other points of difference I would mention:—

1. The greater thinness of the Crag species and the much greater size attained by the zoarium.

2. The apparently thicker peristome, and (so far as can be judged in fossil specimens that have been exposed perhaps to attrition) the circumstance that the extremities of the zoœcia were not produced beyond the surface, or much less so than in the recent form.

#### Genus TUBULIPORA.

##### 1. TUBULIPORA VENTRICOSA, *Busk*.

*Tubulipora ventricosa*, *Busk*, *Quart. Journ. Mic. Sc.* iii. p. 256, pl. ii.

figs. 3 & 4; *Brit. Mus. Cat.* part iii. p. 26, pl. 32. fig. 4 (same figure).

*Tubulipora* (subgenus *Proboscina*) *incrassata* (var. , *forma erecta*),  
*Smitt*, *l. c.* 1866, p. 402, pl. v. fig. 4.

*Hab.* Arctic Sea, Aug. 11, 1875, 13–15 fms. (*H. W. F.*);  
Greenland (on fucus) (*Dr. Sutherland*).

I have omitted several synonyms given by Professor Smitt, not feeling that any certainty can be attached to them.

Captain Feilden's collection contains only a single specimen, but this affords excellent characters.

#### Suborder III. CTENOSTOMATA.

##### Fam. 1. VESICULARIIDÆ.

##### Genus FARRELLA, *Ehrenb.*

##### 1. FARRELLA —?, n. sp. Pl. XIII. fig. 9.

Zoœcia in opposite pairs at very distant intervals on a slender tubular stem. The largest  $0''\cdot06 \times 0''\cdot013$ .

The only Ctenostomatous species is represented by one or two imperfect specimens parasitic upon *Bugula fruticosa*. These, moreover, are so few and so much injured and overgrown by Diatoms, that it is impossible to give an accurate definition of the form, which does not appear to resemble any British species with which I am acquainted, nor does it correspond with Leidy's description and figure of *Bowerbankia gracilis*. In case it be new, it might be termed *Farrella*, or, if with a gizzard, perhaps *Bowerbankia arctica*.

## DESCRIPTION OF PLATE XIII.

- Fig. 1. *Bugula fruticosa*, Packard. Portion, enlarged 25 diam.  
 2. *Flustra serrulata*, n. sp. Forked branch, of nat. size.  
 3. „ „ Another small piece, of natural size.  
 4. „ „ A portion, magnified 25 diam.  
 5. *Eschara perpusilla*, n. sp. A forked branch, magnified 25 diam.  
 6. *Cellepora cervicornis*, Busk. Bifurcating branched portion, of natural dimensions.  
 7. A zoecium of *C. cervicornis*, enlarged 50 diam.  
 8. Zoecium of same, also magnified 50 diam.  
 9. *Farrella arctica*, n. sp. Portion, enlarged 25 diam.

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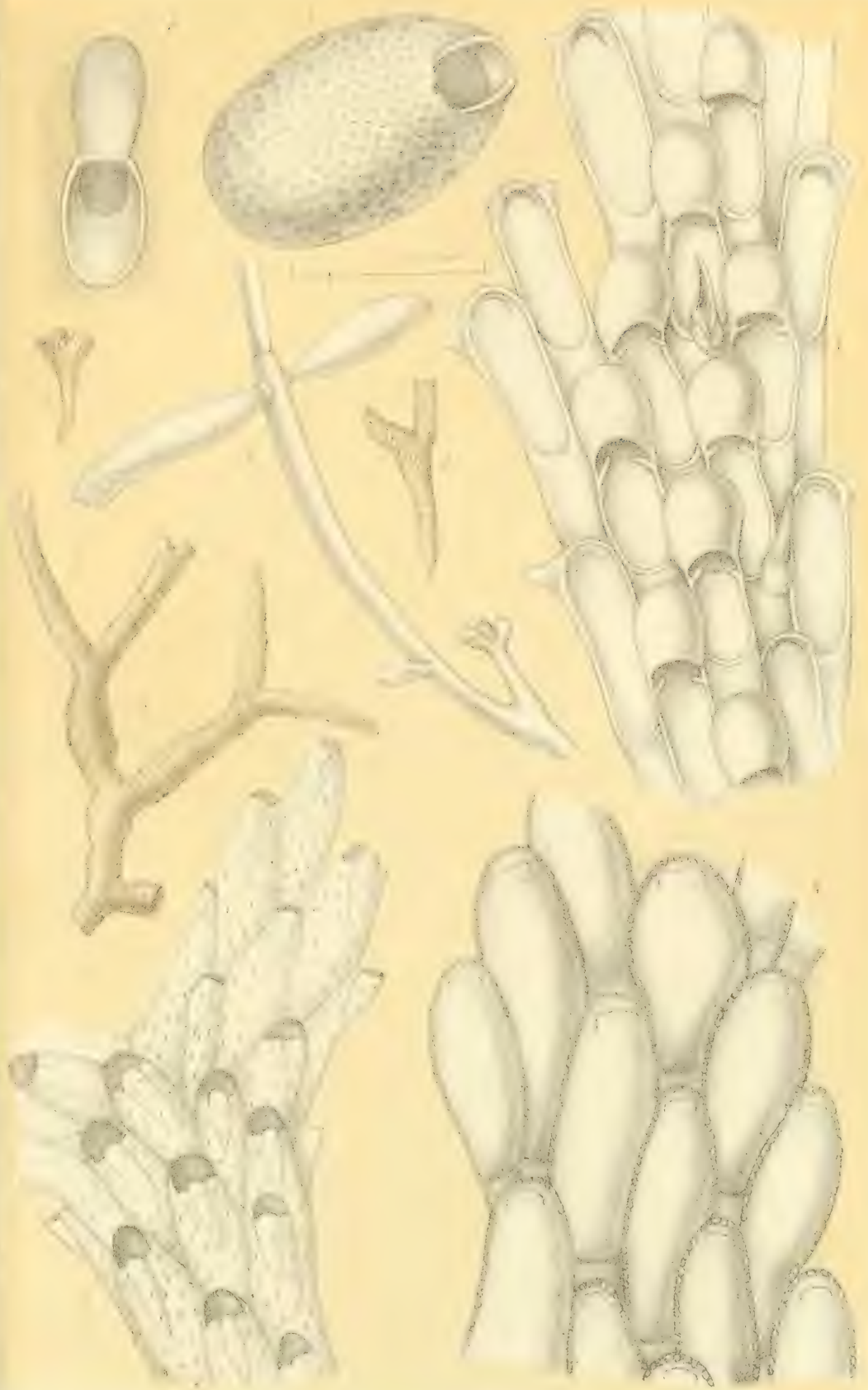
On the Classification of Gasteropoda.—Part II. By JOHN DENIS MACDONALD, M.D., F.R.S., Inspector Gen. R.N. (Communicated by G. E. DOBSON, M.B., F.L.S.)

[Read November 18, 1880.]

THE Scutibranchiata, which were in my former system\* incorrectly associated with the diœcious Gasteropoda, have been arranged in the above revised Table with the other Gasteropoda Monœcia.

The conscientious naturalist, like the theologian, is always in quest of the truth; and consequently, if he finds that this has been arrived at by one or many workers, it need not be subverted for the pure sake of change, or of presenting a subject in a more novel garb. I have therefore adopted the very natural and simple distribution of the Scutibranchiata given by Dr. Gray in his 'Guide to Mollusca,' carrying out an alteration which he has himself suggested, and the propriety of which has indepen-

\* See 'Transactions of the Linnean Society,' vol. xxiii. p. 69 (1860).



Berjean lith.

NEW ARCTIC POLYZOA.

Hanhart imp